

**c. ) Amendments to the Claims**

1. (Currently amended) In an electronic device that accepts hand drawn entries, a method for recognizing the hand drawn entries, comprising the steps of:

- receiving each hand drawn entry as a plurality of sequential points;
- performing at least one of the following steps in any order:
  - measuring the size of the hand drawn entry and comparing the size of the hand drawn entry to a size range;
  - determining the existence and number and angles of vertices in a line which could be drawn between said points;
  - performing a Wide Pen Test including the reiterative steps of constructing an invisible minimum bounding rectangle about the hand drawn entry, placing in the rectangle an invisible trial object constructed of lines forming an identifiable geometric shape and having a defined pixel width, calculating the number of points in the hand drawn entry that lie within said lines of said trail object, and identifying the hand drawn entry as said trial object is said number of points exceeds a predetermined coincidence threshold;
- comparing the results of said at least one step to a set of rules, a favorable comparison leading to conclusive identification of the hand drawn entry as an identified shape.

2. (original) The method for recognizing hand drawn entries of claim 1, wherein said at least one step includes determining the distance between said vertices.

3. Canceled

4. (original) The method for recognizing hand drawn entries of claim 1, wherein said at least one step includes performing a test for Golden Clues.

5. (original) The method for recognizing hand drawn entries of claim 1, wherein said at least one step includes the step of excluding identification of shapes that do not conform to said set of rules.

6. (original) The method for recognizing hand drawn entries of claim 1, wherein said at least one step includes excluding identification of shapes that do not conform to said set of rules regarding size.

7. (original) The method for recognizing hand drawn entries of claim 1, further including a plurality of hand drawn entries, each of said hand drawn entries being analyzed individually.

8. (original) The method for recognizing hand drawn entries of claim 1, further including a plurality of hand drawn entries, said lines being agglomerated and analyzed as a single entity.

9. (Currently amended) In an electronic device that accepts hand drawn entries, a method for recognizing the hand drawn entries, comprising the steps of:

- receiving each hand drawn entry as a plurality of sequential points;
- performing at least one of the following steps in any order:
  - measuring the size of the hand drawn entry and comparing the size of the hand drawn entry to a size range;
  - determining the existence and number and angles of vertices in a line which could be drawn between said points;
  - comparing the results of said at least one step to a set of rules, a favorable comparison leading to conclusive identification of the hand drawn entry as an identified shape,
- further including a plurality of hand drawn entries of ~~different~~ various colors, said set of rules ~~including color rules to determine~~ causing agglomeration of said entries of the same color as a single entity.

10. (Previously amended) In an electronic device that accepts hand drawn entries, a method for recognizing the hand drawn entries, comprising the steps of:

- receiving each hand drawn entry as a plurality of sequential points;
- performing at least one of the following steps in any order:
  - measuring the size of the hand drawn entry and comparing the size of the hand drawn entry to a size range;
  - determining the existence and number and angles of vertices in a line which could be drawn between said points;

comparing the results of said at least one step to a set of rules, a favorable comparison leading to conclusive identification of the hand drawn entry as an identified shape,

further including the step of using arrow logics to establish attributes of said identified shape.

11. (Previously amended) In an electronic device that accepts hand drawn entries, a method for recognizing the hand drawn entries, comprising the steps of:

receiving each hand drawn entry as a plurality of sequential points;

performing at least one of the following steps in any order:

measuring the size of the hand drawn entry and comparing the size of the hand drawn entry to a size range;

determining the existence and number and angles of vertices in a line which could be drawn between said points;

comparing the results of said at least one step to a set of rules, a favorable comparison leading to conclusive identification of the hand drawn entry as an identified shape,

further including the step of creating an info window for at least one of said identified shapes, said info window enabling setting and altering attributes for said at least one identified shape.

12. (original) The method for recognizing hand drawn entries of claim 1, further including the step of carrying out further analytic tests to determine the specific object type.

13. (original) The method for recognizing hand drawn entries of claim 1, wherein said at least one step includes determining the angular trend of said plurality of sequential points.

14. (original) The method for recognizing hand drawn entries of claim 13, further including the step of excluding identification of shapes that do not conform to said set of rules regarding angular trend.

15. (Canceled)

16. (Currently amended) The method for recognizing hand drawn entries of claim ~~15~~ 1, further including the step of determining the size of said bounding rectangle, and comparing said size to size rules for at least one identifiable shape.

17. (Canceled)

18. (Currently amended) The method for recognizing hand drawn entries of claim ~~17~~ 1, further including the step of reiterating said Wide Pen Test when said number of points does not exceed said predetermined threshold, said reiteration

~~including generating a further trial object at least one identifiable geometric shape~~  
inscribed in said bounding rectangle, and comparing the coincidence of said points  
of said hand drawn entry with a wide pen stroke defining ~~at least one identifiable~~  
~~geometric shape~~ said further trial object.

19. (Currently amended) The method for recognizing hand drawn entries of claim 18, wherein said wide pen stroke is selected to be a predetermined width, and further including the step of adaptively altering said predetermined wide pen stroke width by increasing said width when said number of points does not exceed said predetermined threshold and thereafter reiterating said Wide Pen Test.

20. (Currently amended) The method for recognizing hand drawn entries of claim 19, wherein the ~~identifiable geometric shape~~ trial object yielding a degree of coincidence greater than a predetermined coincidence threshold is determined to be the shape of said hand drawn entry.

21. (original) The method for recognizing hand drawn entries of claim 20, further including the step of adaptively altering said coincidence threshold.

22. (original) The method for recognizing hand drawn entries of claim 20, further including the step of determining the angular trend of said hand drawn entry.

23. (original) The method for programming an electronic device of claim 11, including the step of drawing at least one arrow from an attribute shown in an info window to at least one identified shape outside said info window.

24. (original) The method for recognizing hand drawn entries of claim 1, further including the step of determining the angular orientation of said hand drawn entry with respect to a reference orientation.

25. (original) The method for recognizing hand drawn entries of claim 24, further including the step of excluding identification of shapes that do not conform to said set of rules regarding angular orientation.

26. (Previously amended) The method for recognizing hand drawn entries of claim 1, further including the step of determining the proximity of said hand drawn entry to another graphic object , and thereafter excluding identification of shapes that do not conform to said set of rules regarding maximum proximate distance to said another graphic object.

27. canceled.

29. (Previously amended) In an electronic device that accepts hand drawn entries, a method for recognizing the hand drawn entries, comprising the steps of:  
receiving each hand drawn entry as a plurality of sequential points;

performing at least one of the following steps in any order:

measuring the size of the hand drawn entry and comparing the size of the hand drawn entry to a size range;

determining the existence and number and angles of vertices in a line which could be drawn between said points;

comparing the results of said at least one step to a set of rules, a favorable comparison leading to conclusive identification of the hand drawn entry as an identified shape,

further including the step of identifying a portion of said hand drawn entry drawn more slowly than other portions of said hand drawn entry.

30. (original) The method for recognizing hand drawn entries of claim 29, further including the step of determining the existence of a vertex in said portion of said hand drawn entry, and calculating the vertex angle.

31. (original) The method for recognizing hand drawn entries of claim 29, wherein said portion of said hand drawn entry is identified by storing and analyzing time of entry data of said plurality of points.

32. (Currently amended) The method for recognizing hand drawn entries of claim 30, wherein if a vertex angle in said portion of said hand drawn entry is ~~substantially~~ orthogonal  $\pm 20^\circ$ , a golden clue test provides increased potential for identifying a rectilinear shape.



33. (Currently amended) The method for recognizing hand drawn entries of claim 30, wherein if a vertex angle in said portion of said hand drawn entry is ~~substantially~~ non-orthogonal  $\pm 20^\circ$ , a golden clue test provides increased potential for exclusion of all rectilinear shapes.

34. (Previously amended) The method for recognizing hand drawn entries of claim 30, wherein if a pair of vertex angles in said portion of said hand drawn entry are substantially orthogonal, proximate, and opposite, a golden clue test provides increased potential for identification of a folder shape.

35. (Previously amended) The method for recognizing hand drawn entries of claim 30, further including a golden clue test for identifying a first-drawn portion of said hand drawn entry, determining the existence of a vertex in said first drawn portion of said hand drawn entry, and calculating the vertex angle.

36. (original) The method for recognizing hand drawn entries of claim 35, wherein if a vertex angle in said first-drawn portion of said hand drawn entry is substantially orthogonal, said golden clue test provides increased potential for identification of rectilinear shapes.

37. (original) The method for recognizing hand drawn entries of claim 35, wherein if a vertex angle in said first-drawn portion of said hand drawn entry is

substantially non-orthogonal, said golden clue test provides increased potential for exclusion of all rectilinear shapes.

38. (Currently amended) In an electronic device that accepts hand drawn entries, a method for recognizing the hand drawn entries, comprising the steps of:  
receiving each hand drawn entry as a plurality of sequential points lying on the hand drawn line;

a slice step of identifying a starting point, then identifying a first sequential point ~~three of said points~~ that are is adjacent and spaced apart greater than a minimum pixel length distance, then identifying a second sequential point spaced from said first sequential point at least said minimum pixel length distance, said starting point and first and second sequential points constituting a three-point slice; constructing an angle defined by said three points, measuring the constructed angle, and reiterating said slice step in serial fashion with consecutive points of said hand drawn entry to include all said points of said hand drawn entry.

39. (original) The method for recognizing hand drawn entries of claim 38, further including the step of storing the angle measurement of a slice when it exceeds a predetermined angle threshold.

40. (original) The method for recognizing hand drawn entries of claim 39, further including the step of reducing said predetermined angle threshold

whenever said reiterated slice step yields an angular measurement less than said predetermined angle threshold.

41. (original) The method for recognizing hand drawn entries of claim 39, wherein if an angle measurement of a given slice step exceeds said predetermined angle threshold, and the angle measurement of the subsequent slice step is less than said predetermined angle threshold, a vertex is identified in the portion of said hand drawn entry containing said given slice step.

42-47. (Canceled)

48. (original) The method for recognizing hand drawn entries of claim 1, wherein said results of said at least one step include numerical parameters that correspond to characteristics of said hand drawn entry, said numerical parameters being compared to stored magic number values.

49. (original) The method for recognizing hand drawn entries of claim 48, wherein said magic number values are selectively varied in response to inconclusive comparisons to said set of rules.

50. (original) The method for recognizing hand drawn entries of claim 49, wherein said magic number values can be selectively varied by user input.

51. (withdrawn) In an electronic device that accepts hand drawn entries, a method for programming of said device, including the steps of:

using an input device to freehand draw at least one recognizable hand drawn entry;

performing at least one of the following steps in any order:

converting said at least one recognizable hand drawn entry into a functional device having a function that may be carried out by said electronic device;

converting said at least one recognizable hand drawn entry into an action that may be carried out by said electronic device.

52. (withdrawn) The method for programming of claim 51, further including the step of assigning attributes to said recognizable hand drawn entry, said attributes defining said hand drawn entry as a functional device.

53. (withdrawn) The method for programming of claim 51, further including the step of assigning attributes to said at least one recognizable hand drawn entry, said attributes comprising at least one action that may be carried out by said electronic device.

54. (withdrawn) The method for programming of claim 51, further including the step of creating an info window for said at least one recognizable hand drawn entry, said info window enabling setting and altering attributes for said at least one hand drawn entry.

55. (withdrawn) The method for programming of claim 51, further including the step of creating an info window for determining object recognition tests to identify said at least one recognizable hand drawn entry.

56. (withdrawn) The method for programming of claim 51, further include the step of joining a plurality of functional devices in a utilitarian sequence.

57. (withdrawn) The method for programming of claim 56, wherein said utilitarian sequence receives a designated input and produces a desired output.

58. (withdrawn) The method for programming of claim 56, wherein said joining step includes the step of drawing at least one line extending to and intersecting said functional devices in said sequence.

59. (withdrawn) The method for programming of claim 58, further including the step of selecting a line color for said at least one line, said functional devices being drawn in object colors, the coincidence of said line color and said object colors enabling the joining of said line and objects.

60. (withdrawn) The method for programming of claim 51, further including the step of grouping a plurality of selected functional devices for action in common.

61. (withdrawn) The method for programming of claim 60, wherein said grouping step includes the step of drawing a line that substantially circumscribes said selected functional devices.

62. (withdrawn) The method for programming of claim 60, wherein said grouping step includes the step of drawing a line that substantially intersects said selected functional devices.

63. (withdrawn) The method for programming of claim 60, wherein said grouping step includes the step of drawing a bracket that substantially spans said selected functional devices.

64. (withdrawn) The method for programming of claim 51, further including the step of agglomerating at least two of said hand drawn entries into a single object.

65. (withdrawn) The method for programming of claim 64, further including the step of enabling agglomeration only between at least two of said hand drawn entries having a common color.

66. (withdrawn) The method for programming of claim 51, further including the step of applying functional parameters to a recognizable hand drawn

entry by drawing a line from a functional device having defined functional parameters to a recognizable hand drawn entry lacking functional parameters.

67. (withdrawn) The method for programming of claim 51, further including the step of assigning attributes to said at least one recognizable hand drawn entry by inputting text.

68. (withdrawn) The method for programming of claim 51, further including the step of assigning attributes to said at least one recognizable hand drawn entry by making entries in an info window.

69. (withdrawn) The method for programming of claim 51, further including the step of assigning attributes to said at least one recognizable hand drawn entry by inputting at least one verbal statement.

70. (withdrawn) The method for programming of claim 51, further including providing an info window for each recognizable hand drawn entry, said info window enabling setting and altering attributes of said at least one recognizable hand drawn entry.

71. (withdrawn) The method for programming of claim 70, wherein said info window attributes include the aesthetic properties of said recognizable hand drawn entry.

72. (withdrawn) The method for programming of claim 70, wherein said info window attributes include the definition of recognizable hand drawn entry.

73. (withdrawn) The method for programming of claim 70, wherein said info window attributes include the action of said recognizable hand drawn entry.

74. (withdrawn) The method for programming of claim 70, wherein said info window attributes include the assignment of said recognizable hand drawn entry.

75. (withdrawn) The method for programming of claim 74, wherein said assignment sets forth the ability of said recognizable hand drawn entry to acquire the attributes of another recognizable hand drawn entry that is disposed within a predetermined proximity.

76. (withdrawn) The method for programming of claim 51, further including inputting a plurality of said recognizable hand drawn entries.

77. (withdrawn) The method for programming of claim 76, further including the step of connecting said plurality of recognizable hand drawn entries.



78. (withdrawn) The method for programming of claim 77, wherein said connected recognizable hand drawn entries receive a selected input and produce a desired output.

79. (withdrawn) The method for programming of claim 77, wherein said step of connecting includes drawing a line that extends to each of said plurality of recognizable hand drawn entries.

80. (withdrawn) The method for programming of claim 76, further including the step of grouping said plurality of recognizable hand drawn entries for action in common.

81. (withdrawn) The method for programming of claim 80, wherein said grouping step includes drawing a bracket that encompasses said plurality of recognizable hand drawn entries.

82. (withdrawn) The method for programming of claim 51, further including the step of using arrow logics to establish attributes of said at least one recognizable hand drawn entry.

83. (withdrawn) The method for programming of claim 51, further including the step of applying a physical control device on-screen to said at least

one functional device, said physical control device enabling a user to input variable control values to said at least one functional device.

84. (withdrawn) The method for programming of claim 83, wherein said physical control device comprises a crack-and-peel controller.

85. (withdrawn) The method for programming of claim 51, wherein said device includes a telephone, and further including the step of selective call blocking.

86. (withdrawn) The method for programming of claim 85, including the step of assigning telephone numbers to a subset of said functional devices, drawing a symbol representing the call blocking function, and drawing an arrow from said symbol to one of said subset of functional devices to block calls from the telephone number represented by said one functional device.

87. (withdrawn) The method for programming of claim 51, wherein said device includes a telephone, and further including the step of selective call answering.

88. (withdrawn) The method for programming an electronic device of claim 87, including the step of assigning telephone numbers to a first subset of said functional devices, assigning different answering messages to a second subset of

said functional devices, and drawing an arrow from one of said second subset of functional devices to one of said first subset of functional devices to assign the respective answering message to a call from a respective telephone number.

89. (withdrawn) The method for programming an electronic device of claim 51, wherein said device displays a signal waveform, and said functional device comprises a chop tool juxtaposed over said signal waveform, said signal waveform being cut off at the point of intersection of said waveform and said chop tool.

90. (withdrawn) The method for programming of claim 76, wherein said plurality of recognizable hand drawn entries comprise an audio control panel.

91. (withdrawn) The method for programming of claim 76, further including the step of conveying the attributes of one functional device to another functional device by drawing an arrow from said one functional device to said another functional object.

92. (withdrawn) The method for programming of claim 51, wherein said recognizable hand drawn entry comprises an arrow, and further including the step of recognizing the start point and end point of said arrow.

93. (withdrawn) The method for programming of claim 92, wherein said arrow is assigned the function of conveying attributes from a recognizable hand

drawn entry proximate to said starting point to a recognizable hand drawn entry proximate to said end point.

94. (withdrawn) The method for programming of claim 92, wherein said arrow is assigned the function of copying a recognizable hand drawn entry proximate to said starting point to a location proximate to said end point.

95. (original) The method for programming an electronic device of claim 11, including the step of drawing at least one arrow to an attribute shown in an info window from at least one identified shape outside said info window.

96. (canceled)

97. (withdrawn) The method for programming of claim 51, further including the step of creating an info window for said at least one recognizable hand drawn entry, each info window storing parameters determining the function of said at least one recognizable hand drawn entry.

98. (withdrawn) The method for programming an electronic device of claim 54, including the step of drawing at least one arrow to an attribute shown in an info window from at least one identified shape outside said info window.

99. (withdrawn) The method for programming an electronic device of claim 54, including the step of drawing at least one arrow from an attribute shown in an info window to at least one identified shape outside said info window.

100. (withdrawn) The method for programming an electronic device of claim 51, wherein said device displays a graphic object, and said functional device comprises a chop tool juxtaposed over said graphic object, said graphic object being cut off at the line of intersection of said graphic object and said chop tool.

101. (withdrawn) The method for programming of claim 91, further including the step of modifying the attribute conveyed by an arrow by entering a text command proximate to said arrow.

102. (withdrawn) The method for programming of claim 92, further including the step of providing an info window for said arrow, said info window enabling setting and modifying attributes of said arrow.

103. (withdrawn) The method for programming of claim 70, wherein said info window attributes include the function of a recognizable hand drawn entry.